

MECHANICAL ENGINEERING

PROGRAMMES:

Under Graduation

Program Name: B.E in Mechanical Engineering

Level: UG (Intake: 120)

Year of Start: 1958

Program Educational Objectives (PEOs)

PEO1 Be successful in their careers as Mechanical Engineers in a globally competitive industrial arena.

PEO2 Pursue higher education, research and development and other creative and innovative efforts in mechanical engineering.

PEO3 Demonstrate leadership qualities and professionalism in their chosen field of specialization.

PEO4 Be socially and ethically responsible for sustainable development.

Programme Outcomes (POs):

Engineering Graduates will be able to:

PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1 Applying interdisciplinary engineering knowledge and skills in order to fit into core mechanical engineering as well as information technology and management positions in any organization

PSO2 Designing & building environmentally friendly systems by harnessing renewable energy.

PSO3 Analyzing and solving engineering design problems by hands on application of knowledge & skills

PSO4 Comprehend and convey technical information using modern communication tools.